Regular Non Hold Open Arm
This series of door closers is not available with a hold open function.

- With or without suffix "DA" (Delayed Action) closing

<table>
<thead>
<tr>
<th>Closer Power †</th>
<th>Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sized Closer ¹</td>
<td></td>
</tr>
<tr>
<td>Sizes 2, 3, 4, 5, or 6</td>
<td>R8300</td>
</tr>
<tr>
<td>Multi-Size Closer ²</td>
<td></td>
</tr>
<tr>
<td>1 thru 6</td>
<td>R8301</td>
</tr>
</tbody>
</table>

¹ Series are sized door closers with 50% power increase for each size.

² Series can be adjusted from power size 1 thru 6.

† Size 1 weakest power size, size 6 strongest.

Note: For Special Applications a separate door and frame preparation template is packed with these instructions. Use this instruction sheet for installation sequence and closer adjustments only.

- MAXIMUM HINGE SIDE FRAME REVEAL IS 1/8" (3mm).

- All components are non handed.

- It is recommended that the door, on which the door closer will be installed, be hung on ball bearing hinges. Door must swing freely.

- A separate door stop, supplied by others, is recommended to prevent damage to the door closer, closer arm, or to the door, frame or adjacent walls.

- Door and Frame must be properly reinforced, or use of special fasteners employed, to prevent the mounting screws from pulling out.

- All dimensions are given in inches with corresponding metric dimensions (millimeters) in parenthesis.

- Door closer cover projects 2-1/8" (54 mm) from door surface.
Do Not Scale Drawing

Right Hand Door Shown

Same dimensions apply for Left Hand Door measured from centerline of pivot point.

Dimensions are in inches (mm).

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**Preparation for Fasteners**

<table>
<thead>
<tr>
<th>Fasteners</th>
<th>Door or Frame</th>
<th>Drill-Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Drilling</td>
<td>Aluminum or Metal</td>
<td>3/16&quot; (4.30 mm.)</td>
</tr>
<tr>
<td></td>
<td>Wood</td>
<td>3/16&quot; (4.30 mm.)</td>
</tr>
<tr>
<td>1/4&quot; - 20 machine</td>
<td>Metal</td>
<td>#7 (0.201&quot; dia.) or 5 10mm drill tap: 1/4&quot; - 20</td>
</tr>
<tr>
<td>SNB (optional)</td>
<td>Hollow-Metal</td>
<td>9/32&quot; (7.00 mm.) through; 3/8&quot; (9.50 mm.) door face opposite to closer</td>
</tr>
<tr>
<td></td>
<td>Aluminum or Wood</td>
<td>3/8&quot; (9.50 mm.) through</td>
</tr>
<tr>
<td>TBGN (optional)</td>
<td>All</td>
<td>9/32&quot; (7.00 mm.) through; 3/8&quot; (9.50 mm.) dia. x 3/8&quot; (9.50 mm.) deep door face opposite to closer</td>
</tr>
</tbody>
</table>

**Power Adjust Chart for R8301/R8501 ONLY**

<table>
<thead>
<tr>
<th>DOOR</th>
<th>Number of Turns Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM DOOR SIZE</td>
<td>32&quot; (0.85M)</td>
</tr>
<tr>
<td>Interior Door</td>
<td>0</td>
</tr>
<tr>
<td>Exterior Door</td>
<td>2</td>
</tr>
</tbody>
</table>

NOTE: Maximum of 20 turns (360°) of Power Adjustment Shaft. Closer is shipped set at 10 turns.
Installation Sequence

- Select angle of opening and use dimensions shown to locate 4 holes on door for closer body and 2 holes on frame face for arm shoe.

- Prepare door and frame for fasteners. See "Preparation for Fasteners", Page 2.

- For R8301/R8501 MODELS ONLY: Set closing power for door size using chart on Page 2.

- Mount closer body on door. Be sure that power adjustment shaft is away from hinge.

- Place main arm on shaft, aligning ‘S’ mark on arm with pinion flat on pinion shaft (see illustration at right). Push down into position. Secure with 1/4-20 x1/2 (13) 7/16" hex washer head screw.

- With door closed, rotate main arm away from hinge and align shoe with mounting holes in frame. Fasten arm shoe to frame with round head screws provided.

  CAUTION: Closer arm is under spring tension and may be difficult to rotate.

- Make closer adjustments (see page 4) before installing cover.

  CAUTION: Do Not Back Valves Out of Closer or a Leak Will Result.

- INSTALL COVER:
  R8300 Series Only:
  Fasten cover to closer with 2 #6-32 x 5/16 FHMS screws. Screw Pinion cap onto pinion shaft by hand or with a Phillips screw driver - DO NOT OVER TIGHTEN.

  R8500 Series Only:
  Place insert into notch in cover that will not be used. Fasten cover to closer with 2 #6-32 x 5/16 FHMS screws at each end of closer.
Unit Adjustment

Closing Power Adjustment –
Using "Power Adjustment Chart" from page 2, select the correct number of turns for power adjustment shaft that corresponds with the installation. With 5/16" socket or adjustable wrench, rotate adjustment full 360° clockwise turns to desired setting. After closer has been installed and proper adjustments made to the sweep and latch, it may be necessary to readjust spring power for good closing action.

Control Valve Adjustments
(see Figure 2)

Closing Speed Controls (Figure 1A or 1B And 2.)
- Valve “S” Controls Sweep Range.
- Valve "L" Controls Latch Range.
- Valve "D" Controls Delay Range.

For optional Delayed Action models.

Opening Cycle
- "Backcheck" valve controls the strength of cushioning in Backcheck Range. NEVER close this valve completely – it is not to provide a positive stop. (see Figure 4 and Figure 5).

Closing Speed Controls
(see Figure 2)

Opening Door Control
(see Figure 4)

Backcheck Control
(see Figure 5)

Closing Power Control
(see Power Adjust chart Page 2)